

Chapter 1 Introduction

Features Summary

Form Factor	30.5cm x 20.2cm ATX size form factor, 4 layers PCB.
CPU	- Socket 478 for Intel® Micro FC-PGA2 Pentium® 4 processor - Support Intel® Pentium® 4 (Northwood, Prescott) processor - Support Intel® Pentium® 4 Processor with HT Technology - Intel Pentium® 4 400/533/800MHz FSB 2nd cache depends on CPU
Chipset	- Chipset Intel® 865PE/848P HOST/AGP/Controller - ICH4 I/O Controller Hub
Memory	3 184-pin DDR DIMM sockets - Supports DDR400/DDR333/DDR266 DIMM - Supports 128MB/256MB/512MB/1GB unbuffered Non-ECC DRAM - Supports 128-Mb, 256-Mb, 512-Mb technologies implemented as x8/x16 devices - Supports up to 2GB DRAM (Max)
I/O Control	1TEB712
Slots	1 AGP slot supports 8X/4X mode 5 PCI slot supports 33MHz & PCI 2.3 compliant
On-Board IDE	2 IDE bus master (UDMA33/ATA66/ATA100) IDE ports for up to 4 ATAPI devices - Supports PIO mode3,4 (UDMA 33/ATA66/ATA100) IDE & ATAPI CD-ROM
On-Board Peripherals	1 Floppy port supports 2 FDD with 360K, 720K, 1.2M, 1.44M and 2.88M bytes. 1 Parallel port supports Normal/EPP/ECP mode 2 Serial ports (COMA&COMB) 6 USB 2.0/1.1 ports (2 x Rear, 4 x Front by cable) 1 Front Audio Connector 1 IrDA connector for IR

to be continued.....



Due to chipset (Intel® 875P/865G/865PE/848P) architecture limitation, DDR 400 memory module is only supported when using FSB 800 Pentium® 4 processor. A FSB 533 Pentium® 4 processor will support DDR333 and DDR266 memory module. A FSB 400 Pentium® 4 processor will only support DDR 266 memory module.

English

English

Hardware Monitor	- CPU/System Fan Revolution detect - CPU/System Fan Fail Warning - CPU Overheat Warning - System Voltage Detect
On-Board Sound	- Realtek ALC655 CODEC - Support Jack-Sensing - Line Out / 2 front speaker - Line In / 2 rear speaker (by s/w switch) - Mic In / center & subwoofer (by s/w switch) - SPDIF Out / SPDIF In - CD / IV / AUX / IV Game Port
On-Board LAN (*)	- Build in Kimereth-R Chipset 1 RJ45 port
PS/2 Connector	PS/2 Keyboard Interface and PS/2 Mouse interface
BIOS	- Licensed AWARD BIOS - Supports Q-Flash
Additional Features	- PS/2 Keyboard power on by password - PS/2 Mouse power on - STR(Suspend-To-RAM) - AC Recovery - USB KB/Mouse wake up from S3 - Supports EasyTune 4 - Supports @BIOS
Overclocking	- Over Voltage (CPU/AGP/DDR) by BIOS - Over Clock (CPU/AGP/PC/DDR) by BIOS



HT functionally requirement content:

Enabling the functionality of Hyper-Threading Technology for your computer system requires all of the following platform components:

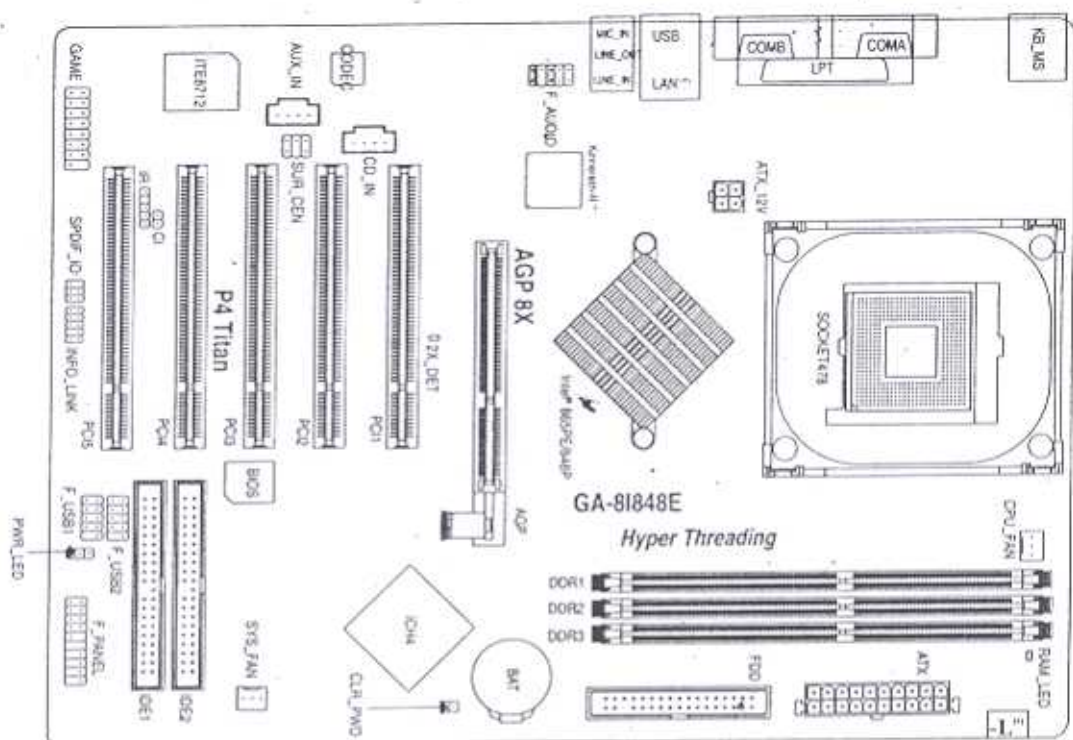
- CPU: An Intel® Pentium® 4 Processor with HT Technology
- Chipset: An Intel® Chipset that supports HT Technology
- BIOS: A BIOS that supports HT Technology and has it enabled
- OS: An operation system that has optimizations for HT Technology



Please set the CPU host frequency in accordance with your processor's specifications. We don't recommend you to set the system bus frequency over the CPU's specification because these specific bus frequencies are not the standard specifications for CPU, chipset and most of the peripherals. Whether your system can run under these specific bus frequencies properly will depend on your hardware configurations, including CPU, Chipsets, SDRAM, Cards... etc.

(*) For GA-8I848E-L only

GA-8I848E(-L) Motherboard Layout



(*) For GA-81848E-L only

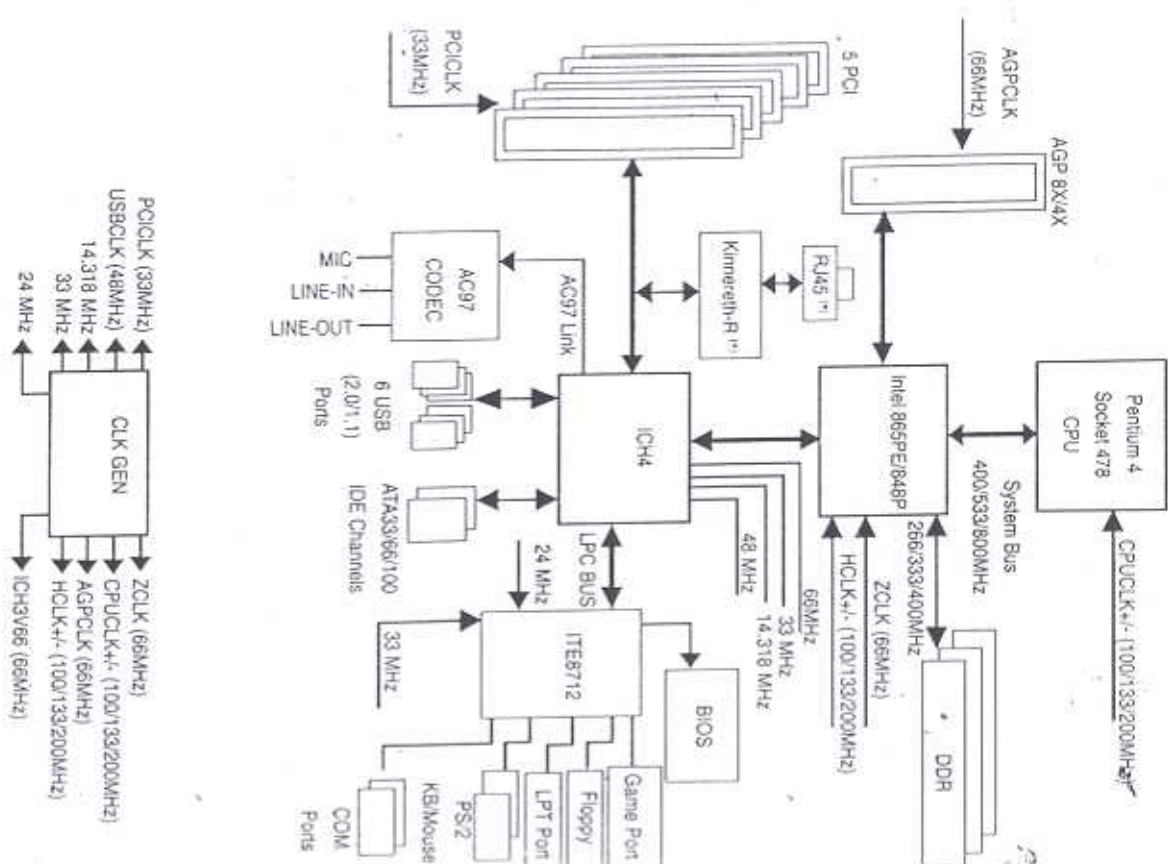
7

Introduction

English

English

Block Diagram



(*) For GA-81848E-L only

GA-61848E(-L) Motherboard

8